



**Steven W. Troxler**  
Commissioner

## North Carolina Department of Agriculture and Consumer Services

March 20, 2019

Tawanda Maignan, Team Leader  
Emergency Response Team  
US EPA Office of Pesticide Programs  
Document Processing Desk (EMEX)  
Room S4900, One Potomac Yard  
2777 Crystal Drive  
Arlington, VA 22202

Dear Ms. Maignan,

This letter notifies the EPA that I am requesting the renewal of our emergency exemption that allows the use of Transform WG Insecticide (EPA Reg.# 62719-625) to control tarnished plant bug in cotton grown in North Carolina. Sulfoxaflor is the active ingredient in Transform WG Insecticide. Dow AgroSciences is aware of this request and fully supports this effort.

According to Dr. Dominic Reisig, Associate Professor of Entomology and extension specialist at N.C. State University, the tarnished plant bug continues to be one of the costliest insects for cotton growers to control. This is especially true in northeastern North Carolina where four to six applications of currently registered insecticides can be needed to control this pest. Factors causing this increasing pest pressure are not fully understood, but resistance to the pesticides currently available is certainly a major problem. Resistance has been well documented for some time in the Midsouth and, in 2018, was also confirmed in North Carolina and Virginia. Dr. Reisig, in collaboration with Dr. Sally Taylor of Virginia Tech, documented this resistance. In addition, through a research trial in North Carolina, Dr. Reisig determined that Transform WG was the only treatment that provided yields that were statistically higher than the check. Using this insecticide likely negated the need for some treatments for bollworms as well, due to preserving their natural enemies.

In order to provide North Carolina cotton growers the opportunity to control this devastating pest while also promoting resistance management, I am requesting this emergency exemption. Should you have any questions, feel free to contact Dr. Reisig at 252-795-3764 x 133 or by email at [ddreisig@ncsu.edu](mailto:ddreisig@ncsu.edu), or Lee Davis with the NCDA&CS Pesticide Section at 919-857-4165 or by email at [lee.davis@ncagr.gov](mailto:lee.davis@ncagr.gov).

Sincerely,

Steven W. Troxler  
Commissioner

cc: North Carolina Pesticide Board  
Dr. Richard H. Linton, Dean, College of Agriculture and Life Sciences, NCSU  
Mr. David Parrish, Chief Executive Officer, North Carolina Cotton Producers Association  
Dr. Dominic Reisig, Associate Professor of Entomology, NCSU  
Dr. Jamey Thomas, US Regulatory Manager, Dow AgroSciences

**STREAMLINED REPEAT REQUEST**  
**SECTION 18 SPECIFIC EXEMPTION**  
**NORTH CAROLINA**  
**March 21, 2019**

**USE BEING REQUESTED**

ACTIVE INGREDIENT:	SULFOXAFLOX
BRAND NAMES:	TRANSFORM WG
EPA REG. NUMBERS:	62719-625
SITE:	COTTON
PEST:	TARNISHED PLANT BUG
FULL APPLICATION DATE:	JUNE 4, 2018
FULL APPLICATION ID#:	18NC08
YEARS REQUESTED:	FIRST SPECIFIC EXEMPTION REQUEST WAS GRANTED IN 2018.

Situation:

1. The emergency condition(s) described in the previously submitted emergency exemption application continues to exist.

*The situation with regard to the need for an emergency label is identical.*

2. All information submitted in the previously submitted emergency exemption application is still accurate: or except as expressly identified in the submitted recertification application, all information submitted in the previously submitted emergency exemption application is still accurate.

*All of the information submitted in our 2018 emergency exemption request is still accurate.*

3. The proposed conditions of use are identical to the conditions of use EPA approved previously (indicate ID# and date); or the proposed conditions of use are identical to the conditions of use EPA approved for the previous emergency exemption (indicate ID# and date) except as expressly identified (explanation attached).

*The conditions of use are identical to those conditions approved by the EPA in 2018.  
(ID# 18NC08, Date: June 15, 2018)*

4. There are no additional conditions or limitations on the eligibility for recertification identified in the previous notice of approval; or any conditions or limitations on the eligibility for recertification identified in the previous notice of approval of the exemption have been responded to (explanation attached).

*No additional conditions or limitations were identified in the previous notice of approval.*

5. The applicant has not newly become aware of any alternative chemical or nonchemical practice that may offer a meaningful level of pest control; or if any such new alternative controls are available, documentation is provided that demonstrates that each such known chemical or practice does not provide adequate control or is not economically or environmentally feasible (explanation attached).

*No new alternative chemicals or nonchemical practices have been identified that will provide acceptable control of this pathogen.*

NC STATE UNIVERSITY

College of Agriculture and Life Sciences  
Gardner Hall  
Campus Box 7613  
Raleigh, NC 27695-7613

919.515.2703 (phone)  
919.515.7746 (fax)

March 3, 2019

To Whom It May Concern:

This letter is to support the granting of a Section 18 Emergency Exemption for Transform WG in North Carolina cotton.

Tarnished plant bug (*Lygus lineolaris*) is one of the costliest insects for North Carolina Cotton growers to control. While many growers do not have to manage this insect throughout the state, in northeastern North Carolina, where populations are heaviest, many growers must dedicate four to six insecticide applications for this insect alone. In one case during 2018, a North Carolina cotton grower sprayed nine times for this insect.

2018 was the first year that Transform was approved for use under a Section 18. In this application, a case was made for the need for this insecticide due, primarily, to indirect evidence for pyrethroid resistance. During the 2018 season, pyrethroid resistant tarnished plant bugs were confirmed in North Carolina and Virginia by myself in collaboration with Dr. Sally Taylor (Virginia Tech). Moreover, in a research trial conducted at Plymouth, North Carolina, the only significant insecticide treatment with yields statistically higher than the check was the Transform treatment. This treatment preserved 193 lbs of lint relative to the check. Furthermore, this insecticide, where it was used prior to bollworm oviposition events, likely prevented some sprays targeted for bollworms by preserving natural enemies.

Transform is a critical player in the fight to preserve cotton yields from tarnished plant bug, to delay resistance to other insecticides, and to avoid spraying alternative broad-spectrum insecticides that may kill beneficial insects and flare other pests. As in 2018, I believe that our case in North Carolina for a Section 18 is similar during 2019; this insecticide will be greatly needed during this field season.

Sincerely,



Dominic Reisig, Ph.D.  
Associate Professor & Extension Specialist  
Department of Entomology and Plant Pathology  
North Carolina State University  
The Vernon James Research and Extension Center  
207 Research Station Road  
Plymouth, NC 27962  
252.793.4428 x133 (office)  
252.505.2082 (cell)



**Dow AgroSciences**

---

**Dow AgroSciences LLC**

9330 Zionsville Road  
Indianapolis, IN 46163

**dowagro.com**

---

March 8, 2019

Dr. Dominic Reisig  
Associate Professor & Extension Specialist  
Department of Entomology  
North Carolina State University  
The Vernon James Research & Extension Center  
207 Research Station Road  
Plymouth, NC 27962

Re: Support letter for Transform™ WG Section 18 on cotton

Dear Dr. Reisig,

Per your request, this letter is to confirm that Dow AgroSciences supports the pursuit of a Section 18 emergency exemption for Transform WG to control plant bugs in cotton in the state of North Carolina. Transform WG has provided excellent efficacy against plant bugs in previous use under Section 18 exemptions, with no negative impacts on non-target insects. It also represents a new class of chemistry with a novel mode of action, and controls pests resistant to other classes of chemistry.

If you have questions, please do not hesitate to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamey Thomas".

Jamey Thomas, Ph.D.  
US Regulatory Manager  
Dow AgroSciences

cc: Tami Jones-Jefferson, DAS  
Randy Huckaba, DAS

™Trademark of Dow AgroSciences LLC

**NC STATE RESTRICTED USE PESTICIDE:** WHEN USED IN NORTH CAROLINA, APPLICATIONS CAN ONLY BE MADE BY LICENSED/CERTIFIED APPLICATORS OR BY PERSONS UNDER THEIR DIRECT SUPERVISION AND ONLY FOR THOSE USES COVERED BY THE LICENSED/CERTIFIED APPLICATORS CERTIFICATION.



**Dow AgroSciences**

**Dow AgroSciences LLC**

**9330 Zionsville Road**

**Indianapolis, IN 46268-1054 USA**

## **Transform<sup>®</sup> WG**

**EPA Reg. No: 62719-625**

### **For Control of Plant Bugs in Cotton**

**Section 18 Emergency Exemption**

**File symbol: 19NCXX**

**FOR DISTRIBUTION AND USE ONLY IN NORTH CAROLINA UNDER SECTION 18 EMERGENCY EXEMPTION.**

**This Section 18 Emergency Exemption is effective XXXXX and expires XXXXX.**

- This labeling must be in the possession of the user at the time of application.
- It is in violation of federal law to use this product in a manner inconsistent with its labeling.
- Read the label affixed to the container for Transform<sup>®</sup> WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Any adverse effects resulting from the use of Transform WG under this emergency exemption must be immediately reported to the North Carolina Department of Agriculture and Consumer Services

**Environmental Hazards Statement:** This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Risks to managed and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 a.m. or after 7:00 p.m. local time or when the temperature is below 55 degrees Fahrenheit (°F) at the site of application.

### **Directions for Use**

#### **Pests and Application Rates:**

<b>Pests</b>	<b>Transform WG (fl. oz./acre)</b>
Plant bugs	1.5 fl. oz. – 2.25 fl. oz. (0.047 – 0.071 lb ai/acre)

**Advisory Pollinator Statement:** Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect bees. If known apiaries are within one mile of cotton fields intended for treatment, applications should be made before 7:00 a.m. or after 7:00 p.m. local time during the flowering period. Growers are advised to refer and, when feasible, observe the cooperative standards outlined in the North Carolina Pollinator Protection Strategy for additional guidance and bee conservation stewardship efforts.

**Application Timing:** Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations. Two applications may be required for optimum tarnished plant bug control under high pest pressure or heavy immigration of plant bugs from other crops.

**Spray Drift Management:** Applications are prohibited above wind speeds of 10 miles per hour (mph).

#### **Restrictions:**

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- A restricted entry interval (REI) of 24 hours applies to all applications.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not make more than four applications per acre per year.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 fl. oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

R396-238

Approved: \_\_/\_\_/\_\_

Replaces R396-205

## **SECTION 18 FINAL REPORT 2018**

Transform for Tarnished Plant Bug in North Carolina Cotton

File Symbol Number: 18NC08

1. **Total acreage, amount of commodity or other unit treated:** In North Carolina, 60,000 acres were sprayed with Transform WG during 2018.
2. **A discussion of the effectiveness of the pesticide in dealing with the emergency condition:** The insecticide performed well in areas where it was sprayed. These acres, in the northeastern part of North Carolina, were heavily infested with tarnished plant bug, requiring up to six insecticide treatments dedicated to controlling this insect, in addition to insecticides used for other insects. In those multiple spray situations where Transform was used, it was used only a single time and was very effective. For example, in a research trial conducted at Plymouth, North Carolina, the only significant insecticide treatment with yields statistically higher than the check was the Transform treatment. This treatment preserved 193 lbs of lint relative to the check. Furthermore, this insecticide, where it was used prior to bollworm oviposition events, likely prevented some sprays targeted for bollworms by preserving natural enemies.
3. **A description of any unexpected adverse effects which resulted from the use of the pesticide under the exemption:** None reported or known.
4. **The results of any monitoring required and/or carried out under the exemption:** Tarnished plant bug pressure was lower statewide (although high in the northeastern part of North Carolina).
5. **A discussion of any enforcement actions taken in connection with the exemption:** NA
6. **Methods of disposition of a food crop, if required to be destroyed under the exemption:** NA
7. **Any other information requested by the Administrator:** NA
8. **In cases where a crisis exemption was declared, an explanation as to why there was a need to utilize the crisis provisions:** NA